



DEPARTMENT OF TRANSPORTATION  
MATERIALS TRANSPORTATION BUREAU  
WASHINGTON, D.C. 20590

IAEA CERTIFICATE OF COMPETENT AUTHORITY

Type B Radioactive Material Package Design

Certificate Number USA/6703/B

This establishes that the packaging design described herein, when loaded with the authorized radioactive contents, has been certified by the National Competent Authority of the United States, as meeting the regulatory requirements for Type B packaging for radioactive materials as prescribed in IAEA<sup>1</sup> Regulations and SS 49 CFR 173.393b, 173.395(c)(2) of the USA<sup>2</sup>, Regulations for the transport of radioactive materials.

I. Package Identification - Thermoelectric generator, Model RG-1.

II. Packaging Description - Packaging authorized by this certificate consists of a uranium and tungsten shielded steel weldment 18 inches high and 14 inches in diameter weighing approximately 800 pounds.

III. Authorized Radioactive Contents - The authorized contents consist of large quantity radioactive material as not more than 8,300 curies of Strontium-90 as Strontium Titanate doubly encapsulated.

IV. General Conditions -

a. Each user of this certificate must have in his possession a copy of this certificate.

b. Each user of this certificate, other than Naval Nuclear Power Unit, Port Hueneme, California shall register his identity in writing to the Office of Hazardous Materials Operations, Materials Transportation Bureau, U. S. Department of Transportation, Washington, D. C. 20590.

c. This certificate does not relieve any consignor or carrier from compliance with any requirement of the Government of any country through or into which the package is to be transported.

V. Marking and Labeling - The package must also bear the marking USA/6703/B as well as the other marking and labels prescribed by the USA Regulations.

VI. Expiration Date - This certificate, unless renewed, expires on January 31, 1980.

This certificate is issued in accordance with the requirements of the IAEA and USA Regulations and in response to the March 4, 1977 petition by the Naval Nuclear Power Unit, Port Hueneme, California and in consideration of the associated information provided in U. S. Nuclear Regulatory Commission Certificate USA/6703/B (Appendix A).

Certified by:

*A. W. Grella*  
A. W. Grella  
Chief, Technology Division  
Office of Hazardous Materials Operations  
U. S. Department of Transportation

*March 7, 1977*  
(DATE)

<sup>1</sup>"Safety Series No. 6, Regulations for the Safe Transport of Radioactive Materials, 1967 Edition" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

<sup>2</sup>Title 49, Code of Federal Regulations, Parts 100-199, USA.

U.S. ATOMIC ENERGY COMMISSION  
CERTIFICATE OF COMPLIANCE  
For Radioactive Materials Packages

Compliance

1a. Certificate Number	1b. Revision No.	1c. Package Identification No.	1d. Page No.	1e. Total No.
6703	0	USA/6703/B( )	1	2

2. PREAMBLE

- 2a. This certificate is issued to satisfy Sections 173.393a, 173.394, 173.395, and 173.396 of the Department of Transportation Hazardous Materials Regulations (49 CFR 170-189 and 14 CFR 103) and Sections 146-19-10a and 146-19-100 of the Department of Transportation Dangerous Cargoes Regulations (46 CFR 146-149), as amended.
- 2b. The packaging and contents described in item 5 below, meets the safety standards set forth in Subpart C of Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions."
- 2c. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

3. This certificate is issued on the basis of a safety analysis report of the package design or application—

(1) Prepared by (Name and address):

General Atomic Company  
P.O. Box 81608  
San Diego, California 92138

(2) Title and Identification of report or application:

General Atomic Company application dated  
December 16, 1975

(3) Docket No. 71-6703

4. CONDITIONS

This certificate is conditional upon the fulfilling of the requirements of Subpart D of 10 CFR 71, as applicable, and the conditions specified in item 5 below.

5. Description of Packaging and Authorized Contents, Model Number, Fissile Class, Other Conditions, and References:

(a) Packaging

(1) Model No.: RG-1

(2) Description

The package, a thermoelectric generator, is 18 inches high and has a base diameter of 14 inches and weighs approximately 800 pounds. The components include the main housing, uranium and tungsten shield, housing flange, electrical connector and lifting lugs. A notch at the base provides the tie-down flange. The 1.75-inch thick cover flange is bolted to the housing by 16 or 20 steel bolts depending on the generator configuration. The electrical receptacle is bolted to the cover flange with an O-ring being provided between the interfaces and on the lateral surface of the feed plug. The lifting lug is threaded into the cover flange and is removable if necessary for an operational installation.

5. (a) Packaging (continued)

(3) Drawings:

The packaging 16-Bolt configuration is constructed in accordance with the detailed drawings listed on Gulf General Atomics Generator Assembly drawing number 1699-0001, and modified for the 20-bolt configuration by drawings: J346-3000, Rev. K; D346-3020, Rev. F; and D346-3021, Rev. G.

(b) Contents

(1) Type and form of material

Strontium-90 titanate doubly encapsulated in a Type 304L stainless steel liner and Hastelloy C capsule.

(2) Maximum quantity of material per package

8,300 curies.

6. The package authorized by this Certificate of Compliance is hereby approved for use under the general license provisions of Paragraph 71.12(b) of 10 CFR Part 71.

7. Expiration date: January 31, 1980.

REFERENCES

General Atomic Company application dated December 16, 1975.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

*Charles E. MacDonald*

Charles E. MacDonald, Chief  
Transportation Branch  
Office of Nuclear Material  
Safety and Safeguards

Date JAN 23 1975